

A LIST OF THE LAND-SHELLS OF THE ISLAND OF LOMBOCK,
WITH DESCRIPTIONS OF NEW SPECIES.

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PLATE II, Figs. 1-21.

THE collection upon which the present paper is based was made by Mr. A. Everett, and contains some new and interesting species. The large proportion of new forms constantly discovered by Mr. Everett shows how meagre is our knowledge of the insular faunas of the Malayan Archipelago. In the present instance, for example, out of the sixteen species obtained, as many as twelve were undescribed. In this case, however, before the publication of Dr. E. von Martens' paper¹ upon the specimens collected by Herr Fruhstorfer, only a very few forms were known from Lombok. Of the twenty-five species quoted, sixteen appear to be peculiar to the island, three are also Javanese, three Bornean, two Sumatran, two Moluccan, one occurs in Flores and the Philippine Islands, and one in Sumbawa.

Before enumerating the species, I wish to thank the authorities of the Berlin Museum for the loan of the unfigured types described by Dr. E. von Martens, and also for a very careful drawing by Miss Zglinicka of the type of *Stenogyra discernibilis*.

1. PARMARION INTERMEDIUS, Collinge. Pl. II, Fig. 1.

Parmarion intermedium, Collinge: Proc. Zool. Soc., 1897, p. 779, pl. xlv, figs. 5-11.

Hab.—Lombok (Everett).

Mr. Collinge has quoted Lombok as if it were in Borneo. This, however, is incorrect, for the specimens which he described came from the island of Lombok, with the other species enumerated in the present paper.

2. HELICARION LINEOLATUS, Martens.

Helicarion lineolatus, Martens: Preuss. Exped. Ost-Asien, Zool. vol. ii, p. 184, pl. xii, fig. 4.

Hab.—Sumatra, Java, Lombok (Martens).

Not found by Mr. Everett.

3. ARIOPHANTA (XESTA) NEMORENSIS (Müller).

Helix nemorensis, Müller: Reeve, Conch. Icon., fig. 474; Pfeiffer, Conch. Cab., 2nd ed., pl. xxxv, figs. 9-11.

Hab.—Lombok (Wallace, Fruhstorfer, Everett).

¹ Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, pp. 157-164.

Reeve's figure gives a good idea of the form of this species, but the uppermost of the bands in Mr. Everett's specimens is much narrower than the two others.

4. ARIOPHANTA (XESTA) COFFEA (Pfeiffer).

Helix coffea, Pfr.: Proc. Zool. Soc., 1855, p. 111; Mon. Helic., vol. iv, p. 23.

Hab.—Moluccas (Pfr.); Lombok (Wallace).

The locality of this species, founded on a single specimen in the Cuming Collection, requires confirmation.

5. ARIOPHANTA (HEMIPLECTA) RUFOLINEATA, n.sp. Pl. II, Fig. 2.

Testa tenuis, depressa, angustissime vel fere obtecte perforata, leviter carinata, fusco-cornea, infra carinam pallidam linea angusta rufa cineta; spira parum elata, ad apicem obtusissima; anfractus $4\frac{1}{2}$, celeriter accrescentes, lineis incrementi armatis striisque spiralibus minute granulati, leviter convexiusculi, ultimus vix descendens, subacute carinatus, infra inflatus, versus medium nitens, haud granulatus; apertura obliqua, ampla, late lunata, opalina, rufo unilineata; peristoma tenue, margine columellari ad insertionem lilaceo, anguste reflexo. Diam. maj. 30, min. 25 mm.; alt. 19 mm.

Differing from *A. Fruhstorferi* and *A. internota* in the granular sculpture, etc. The keel almost disappears anteriorly, so that the curve of the outer lip is not affected by it.

6. ARIOPHANTA (HEMIPLECTA) INTERNOTA, n.sp. Pl. II, Fig. 3.

Testa tenuis, depressa, subconoidea, leviter carinata, minute perforata, supra fusco-cornea, infra pallidior, nitida, striis incrementi arcuatis sculpta; spira convexe conoidea, ad apicem obtusa; anfractus 5, convexiusculi, ultimus antice levissime descendens, obtuse carinatus, carina aperturam versus fere evanida; apertura obliqua, late lunata, opalina; peristoma tenue, margine columellari ad insertionem paulo dilatato et reflexo. Diam. maj. 28, min. 24 mm.; alt. 17 mm.

In size and colour very like *A. Fruhstorferi*, Martens, but with a more elevated spire, rounder whorls, and much less strongly keeled.

7. ARIOPHANTA (HEMIPLECTA) FRUHSTORFERI (Martens). Pl. IV, Fig. 4.

Nanina (Hemiplecta) Fruhstorferi, Martens: Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 158.

Hab.—Lombok (Fruhstorfer and Everett).

The specimen figured is in the British Museum (Natural History).

8. ARIOPHANTA (HEMIPLECTA) OXYCONUS (Martens). Pl. II, Fig. 6.

Trochonanina oxyconus, Martens: Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 159.

Hab.—Lombok (Fruhstorfer).

Figured from the type kindly lent by the Berlin Museum.

9. *ARIOPHANTA* (*HEMPLECTA*) *PERINSIGNIS*, n.sp. Pl. II, Fig. 5.

Testa imperforata, trochoidea, carinata, luteo-castanea, supra carinam fusco-nigro anguste zonata, et infra suturam zona latiore albo maculata picta, supra haud nitida, infra nitens, versus medium viridi-flavescentis; spira conica, ad apicem obtusiuscula, nigrescens; anfractus 7, leviter convexi, striis incrementi obliquis arcuatis sculpti, ultimus haud descendens, ad peripheriam acute carinatus, supra et infra æque convexus; apertura obliqua, angulato-lunata, opalina, in medio et ad suturam nigro fasciata; peristoma tenue, margine columellari ad insertionem pallide roseo, incrassato, reflexo, appresso. Diam. maj. 24·5, min. 22 mm.; alt. 19 mm.

Allied to *Trochonanina oxyconus*, Martens, but larger, not perforate, and differently coloured. The white blotches upon the dark infra-sutural band are hydrophanous, as in many species of *Cochlostyla*.

10. *EVERETTIA* (?) *PERGLABRA*, n.sp. Pl. II, Figs. 7, 8.

Testa parva, depressa, orbicularis, anguste umbilicata, fusco-cornea, subtus pallidior, pellucida, nitidissima, lineis incrementi tenuibus striata; spira parum elata, ad apicem obtusa; anfractus 5, lente accrescentes, convexiusculi, infra suturam depresso marginati, ultimus haud descendens, ad peripheriam rotundatus; apertura obliqua, lunata; peristoma tenue, margine columellari tenui, ad insertionem dilatato et reflexo. Diam. maj. 8·5, min. 7 mm.; alt. 4 mm.

Hab.—Lombok, 1,500 feet (Everett).

Until the soft parts are known, the generic position of this species must remain uncertain.

11. *MICROCYSTIS* *DYAKANA*, Godwin-Austen.

Microcystis Dyakana, Godwin-Austen: Proc. Zool. Soc., 1891, p. 37, pl. iv, figs. 4-4c.

Hab.—Busan Hills, Borneo, and Lombok, 1,500 feet (Everett).

Three specimens from Lombok agree in every respect, excepting size, with Bornean examples. The largest shell, which may not, however, be adult, is only 7 mm. in its greater diameter.

12. *SITALA* *COLLINÆ*, n.sp. Pl. II, Figs. 9, 10.

Testa trochoidea, angulata, anguste rimata, tenuis, cornea, pellucida, lineis incrementi tenuibus obliquis striis spiralibus minutis supra et infra decussatis sculpta, sericata; spira breviter conica, ad apicem mediocriter acuta; anfractus 5, convexiusculi, lente accrescentes, ultimus in medio acute angulatus, infra convexiusculus, antice haud descendens; apertura obliqua, angulato-lunata; peristoma tenue, margine columellari ad insertionem reflexo. Diam. maj. 3·5, min. 3 mm.; alt. 3 mm.

Hab.—Lombok, 1,500 feet.

It is only under the microscope that the beauty of the minute cancellation is observable. *S. angulata*, Issel, and *S. demissa*, Smith, both from Borneo, are allied species differing somewhat in form.

13. PUPISOMA PULVISULUM (Issel).

Helix (Fruticicola) pulvisulum, Issel: Ann. Mus. Civ. Genova, 1874, vol. vi, p. 406, pl. v, figs. 24-7.

Hab.—Borneo (Issel); Labuan (Everett); Lombock, 1,200 feet, on fruit-trees (Everett).

A second species common to Borneo and Lombock, possibly transported with orange- or other fruit-trees.

14. TROCHOMORPHA BICOLOR, Martens.

Trochomorpha bicolor, Martens: Preuss. Exped. Ost-Asien, Zool. vol. ii, p. 252, pl. xiii, fig. 2.

Hab.—Sumatra, Java, Borneo, Lombock (Martens).

15. HELIX (?) SMIRUENSIS, Mousson (*em.*).

Helix Smimensis, Mousson: Land- und Sussw.-Moll. Java, p. 21, pl. ii, fig. 10.

Helix Smiruensis, Mouss.: Martens, Preuss. Exped. Ost-Asien, Zool. vol. ii, p. 268; Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 160.

Helix (Trichia) Smiruensis, Mouss.: Tryon, Man. Conch., ser. II, vol. iii, p. 184, pl. xl, figs. 44-6.

Hab.—Java (Mousson, Martens); Lombock (Martens).

In appearance resembling the smaller European forms of *Fruticicola*, but differing in the radula (Martens).

16. PLANISPIRA INFRACTA (Martens). Pl. II, Figs. 11, 12.

Helix infracta, Martens: Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 160.

Helix porcellana, Pfeiffer (*non* Grateloup): Mon. Helic., vol. iv, p. 273.

Hab.—Lombock (Fruhstorfer).

Figured from the type, kindly lent by the Berlin Museum.

17. STENOGYRA LOMBOCKENSIS, n.sp. Pl. II, Fig. 14.

Testa elongata, vix rimata, luteo-grisea, strigis albis hydrophanis obliquis picta, lineis incrementi tenuibus confertis subgranulosis sculpta; spira elongata, ad apicem obtusissima; anfractus 8, superiores tres confertim fortiter costulati, convexi, cæteri convexiusculi, sutura obliqua sejuncti, ultimus elongatus, antice paulo angustatus; apertura elongata, superne acuta, longit. totius $\frac{1}{3}$ æquans; labrum tenue, arcuatim in medio prominens, marginibus callo tenui junctis, columellari recto, anguste reflexo. Long. 26, diam. 8 mm.

Differs from *S. discernibilis*, Martens, in sculpture, colour, etc. The fine costulæ on the protoconch exhibit a very pretty crenulated appearance at the suture.

18. *STENOGYRA DISCERNIBILIS*, Martens. Pl. II, Fig. 13.

Stenogyra discernibilis, Martens: Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 162.

Figured from a drawing of the type by Miss Zglinicka, kindly sent by Dr. E. von Martens.

Hab.—Lombok (Fruhstorfer).

19. *STENOGYRA (OPEAS) PANAYENSIS* (Pfeiffer).

Bulimus Panayensis, Pfr.: Mon. Helic., vol. ii, p. 156; Reeve, Conch. Icon., fig. 76.

Stenogyra Panayensis, Pfr.: Martens, Preuss. Exped. Ost-Asien, Zool. vol. ii, p. 376, pl. xxii, fig. 8; Sitzungs Ber. Gesell. naturf. Freunde Berlin, 1896, p. 163.

Hab.—"Philippines, Moluccas, Timor, Flores, Lombok" (Martens).

20. *SUBULINA (NOTHUS) SOROR*, n.sp. Pl. II, Fig. 15.

Testa turrata, rimata, corneo-pellucida, nitida, striis incrementi obliquis flexuosis sculpta; spira subgradata, ad apicem obtusa; anfractus 7, perconvexi, lente accrescentes; apertura recta, inverse auriformis, longit. totius $\frac{1}{3}$ subæquans; peristoma tenue, margine externo arcuatim prominente, columellari reflexo, inferne oblique subtruncato. Long. 11, diam. fere 4 mm.

Very like *S. simplex*, Guppy, from Trinidad, in form, but not so strongly sculptured. *Stenogyra Semperi*, Hidalgo,¹ from Mindanao, is also an allied species.

21. *SUBULINA (NOTHUS) BREVIOR*, n.sp. Pl. II, Fig. 16.

Testa obtecte perforata, turrata, tenuis, pellucida, cornea, nitida, striis incrementi sculpta; spira mediocriter elongata, ad apicem obtusa; anfractus sex conspicue convexi; apertura inverse auriformis, longit. totius $\frac{1}{3}$ vix æquans; peristoma tenue, margine externo arcuatim prominente, columellari leviter incrassato, reflexo, inferne oblique vix truncato vel subtorto. Long. 9, diam. 4 mm.

Shorter and proportionally broader than *S. soror*, with a more indistinct columellar truncation or oblique basal fold or twist.

22. *TORNATELLINA CITREA*, n.sp. Pl. II, Fig. 17.

Testa minuta, imperforata, ovata, tenuis, fusco-cornea, parum nitida, lineis incrementi obliquis tenuibus striata; spira brevis, obtusissima; anfractus $3\frac{1}{2}$, perconvexi, ultimus subglobosus; apertura auriformis, longit. totius $\frac{1}{2}$ paulo superans, dente unico parietali minuto

¹ Journ. de Conch., 1888, p. 36, pl. vi, fig. 3.

instructa; labrum tenue, arcuatum; columella recta, incrassata, ad basim abrupte truncata. Long. 2, diam. 1.5 mm.

Hab.—On orange-trees.

Under the microscope the surface has a minutely frosted appearance, produced by excessively fine spiral striation.

23. *CYCLOTUS (PSEUDOCYCLOPHORUS) LOMBOCKENSIS*, n.sp.

Pl. II, Fig. 18.

Testa globoso-turbinata, anguste umbilicata, rufescens, lineis albis undulatis sutura radiantibus picta, et supra anfractum ultimum plus minus obscure albo notata; spira conoidea, ad apicem subobtusa; anfractus $4\frac{1}{2}$ –5, perconvexi, sutura profunda sejuncti, apicales nigropurpurei, ultimus antice leviter descendens, incrementi lineis obliquis striis spiralibus decussatis sculptus; apertura rufo-fusca, albo variegata; peristoma duplex, continuum, subincrassatum, pallide carneum, margine externo interno magis prominente, subexpanso, sed haud reflexo. Diam. maj. 14, min. 11 mm.; alt. 13 mm.

Hab.—Rinjani Peak, 2,500 feet.

This species belongs to the same group as *C. politus*, Sby., *C. fulminatus*, Martens, etc.

24. *REGISTOMA OBLIQUUM*, n.sp. Pl. II, Figs. 19, 20.

Testa oblonga, compressa, irregularis, subpellucida vel pallide rufescens, polita; anfractus 5; superiores quatuor regulariter accrescentes, vix convexiusculi, spiram brevem conicam formantes, ultimus valde oblique distortus, supra aperturam planiusculus, conspicue oblique descendens, sed prope labrum subito ascendens; sutura pellucide anguste marginata; apertura parva, circularis; peristoma leviter incrassatum, albidum, margine columellari minute inciso. Diam. 3.6, alt. 6 mm.

Hab.—Sumbawa, 2,500–5,000 feet (Doherty); Lombok, 4,000 feet (Everett).

This species is distorted like certain forms of *Streptaxis*, the spire being regular and the body-whorl remarkably oblique, whilst the penultimate bulges out on the left side above the last. *Callianella Wallacei* (Pfr.) is very similar in form.

25. *DIPLOMMATINA LOMBOCKENSIS*, n.sp. Pl. II, Fig. 21.

Testa sinistrorsa, imperforata, pupoidea, cornea, pellucida, nitida; anfractus 6, perconvexi, apicales duo laeves, cæteri lamellis tenuibus obliquis arcuatis subdistantibus (in anfractu penultimo circiter 20) instructi, ultimus penultimum latitudine æquans, supra aperturam contractus; apertura late auriformis; peristoma leviter incrassatum, expansum, continuum, margine superiore appresso, columellari intus prominente, vel rotunde subdentato. Long. 3.5, diam. 1.6 mm. Apertura cum perist. 1.5 longa.

Hab.—Lombok (W. Doherty).

The last lamella on the body-whorl is well developed and situated close to the peristome, which consequently has a duplex appearance.

EXPLANATION OF PLATE II.

- FIG. 1. *Parmarion intermedius*.
 ,, 2. *Ariophanta (Hemiplecta) rufolineata*.
 ,, 3. _____ *internota*.
 ,, 4. _____ *Fruhstorferi*.
 ,, 5. _____ *perinsignis*.
 ,, 6. _____ *oxyconus*.
 ,, 7, 8. *Everettia perglabra*.
 ,, 9, 10. *Sitala collinae*.
 ,, 11, 12. *Planispira infracta*.
 ,, 13. *Stenogyra discernibilis*.
 ,, 14. _____ *Lombockensis*.
 ,, 15. *Subulina (Nothus) soror*.
 ,, 16. _____ *(Nothus) brevior*.
 ,, 17. *Tornatellina citrea*.
 ,, 18. *Cyclotus (Pseudocyclophorus) Lombockensis*.
 ,, 19, 20. *Registoma obliquum*.
 ,, 21. *Diplommatina Lombockensis*.

 ,, 22. *Planispira dulcissima*.
 ,, 23, 24. *Charopa delectans*.
 ,, 25. *Rhachis Aldabrae*.
 ,, 26. *Diplommatina Whiteheadi*.
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